

PATENT COOPERATION TREATY

PCT

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT
(PCT Article 36 and Rule 70)



REC'D 21 MAY 2004

Applicant's or agent's file reference IP/P7130/WOD	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/GB 03/01545	International filing date (day/month/year) 09.04.2003	Priority date (day/month/year) 19.04.2002
International Patent Classification (IPC) or both national classification and IPC H04N7/26		
Applicant QINETIQ LIMITED		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.
- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
- These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the opinion
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 28.10.2003	Date of completion of this report 18.05.2004
Name and mailing address of the International preliminary examining authority:  European Patent Office - Gitschiner Str. 103 D-10958 Berlin Tel. +49 30 25901 - 0 Fax: +49 30 25901 - 840	Authorized Officer Gries, T Telephone No. +49 30 25901-429 

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/01545

I. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)*):

Description, Pages

1-17 as originally filed

Claims, Numbers

1-21 as originally filed

Drawings, Sheets

1/2-2/2 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
☐ the language of publication of the international application (under Rule 48.3(b)).
☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority in written form.
☐ furnished subsequently to this Authority in computer readable form.
☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
☐ the claims, Nos.:
☐ the drawings, sheets:

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/GB 03/01545

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	1-21
	No: Claims	
Inventive step (IS)	Yes: Claims	1-21
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-21
	No: Claims	

2. Citations and explanations

see separate sheet

Re Item V

Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. State of the art:

The prior art document D1, US 2001/024529 A1 (CHAO HONGYANG ET AL) 27 September 2001 (2001-09-27) was cited in the application and describes a similar system and method for integer wavelet transform of colour images, also disclosing colour transforms between different colour spaces before the wavelet transformation is conducted. It already discloses the suppression (discarding) of such wavelets coefficients, which fall below a certain threshold as defined in claim 1 excluding the last paragraph g) of this claim.

2. Difference to the prior art, statement of the objective problem and solution

The difference between claim 1 and the prior art is the discarding of such wavelet coefficients which both correspond to image areas of relatively lower importance and which are below the threshold. This solves the objective problem of improving the compression efficiency and the efficiency of the compression calculation, because different degrees of compression and the discard operation can now be applied to different areas of importance at the wavelet level (discarding is based on two criteria, i.e. both the relative importance and threshold comparison).

A different level of compression is conducted for areas according to their relative importance, thus a low (e.g. zero) degree of compression in areas of an colour image of relatively higher importance. The suppression (discarding) of a wavelet coefficient is performed in accordance to both its value (below or above a threshold) and the relative importance corresponding to image areas, the application assesses individual wavelets on the basis of these two criteria instead of making decisions in different domains as disclosed in the prior art D1.

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/GB03/01545

3. Conclusion

No prior art document suggests or hint at the problem of improving the compression efficiency and efficiency of compression calculation by combining the threshold-approach (to discard small coefficients) with the relative-importance criterium in the wavelet discarding step, therefore the claims appear to fulfill the requirements for novelty, inventive step and industrial applicability,

There are independent claims in several categories, which are corresponding. Claim 1 discloses the method and has depending claims 2 to 10. Independent claim 11 and depending claims 12 to 20 disclose a corresponding computer program with instructions to implement the method and independent claim 21 is an apparatus counterpart of the claims 11 to 20, to which all the remarks apply mutatis mutandis.